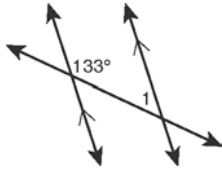


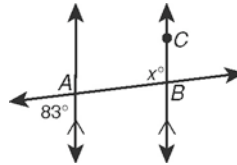
3-2 Assignment.

Find each angle measure.

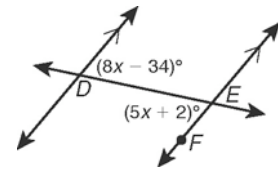
1. $m\angle 1$



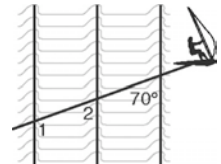
2. $m\angle ABC$



3. $m\angle DEF$



4. Ocean waves move in parallel lines toward the shore. The figure shows Sandy Beaches windsurfing across several waves. For this exercise, think of Sandy's wake as a line. $m\angle 1 = (2x + 2y)^\circ$ and $m\angle 2 = (2x + y)^\circ$. Find x and y .



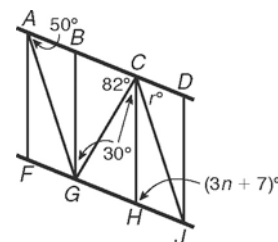
$x =$ _____

$y =$ _____

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Use the diagram of a staircase railing. $\overline{AG} \parallel \overline{CJ}$ and $\overline{AD} \parallel \overline{FJ}$. Choose the best answer.



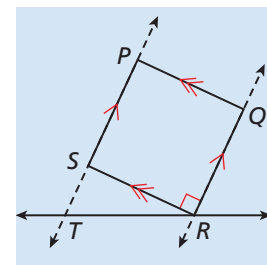
5. _____ Which is a true statement about the measure of $\angle DCJ$?

- A It equals 30° , by the Alternate Interior Angles Theorem.
- B It equals 30° , by the Corresponding Angles Postulate.
- C It equals 50° , by the Alternate Interior Angles Theorem.
- D It equals 50° , by the Corresponding Angles Postulate.

6. _____ Which is a true statement about the value of n ?

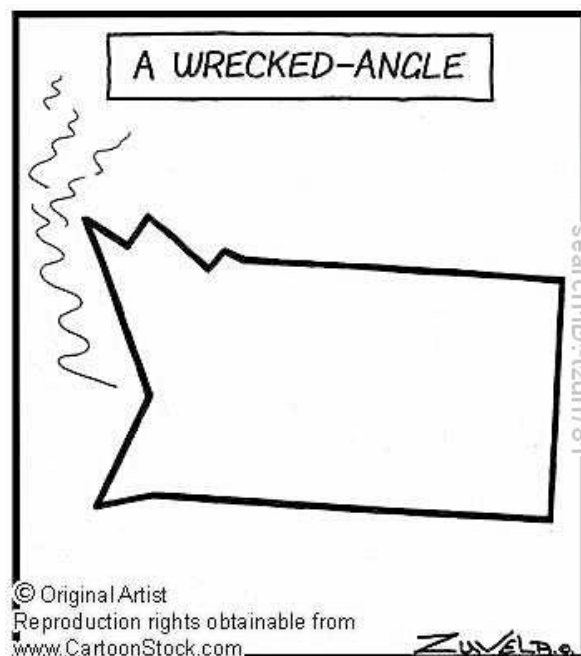
- F It equals 25° , by the Alternate Interior Angles Theorem.
- G It equals 25° , by the Same-Side Interior Angles Theorem.
- H It equals 35° , by the Alternate Interior Angles Theorem.
- J It equals 35° , by the Same-Side Interior Angles Theorem.

7. In the diagram, which represents the side view of a mystery spot, $m\angle SRT = 25^\circ$, \overline{RT} is a transversal to \overline{PS} & \overline{QR} .



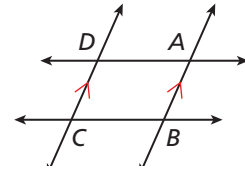
a) What type of angle pair is $\angle QRT$ & $\angle STR$?

b) Find $m\angle STR$. Use a postulate or theorem to justify your answer



8.

/// ERROR ANALYSIS /// In the figure, $m\angle ABC = (15x + 5)^\circ$, and $m\angle BCD = (10x + 25)^\circ$. Which value of $m\angle BCD$ is incorrect? Explain.



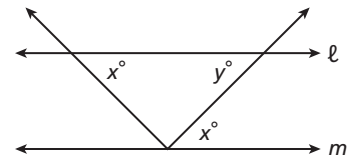
A

$$\begin{array}{r}
 15x + 5 = 10x + 25 \\
 -10x \quad -10x \\
 \hline
 5x + 5 = 25 \\
 -5 \quad -5 \\
 \hline
 5x = 20 \\
 x = 4 \\
 \\
 m\angle BCD = 10(4) + 25 = 65^\circ
 \end{array}$$

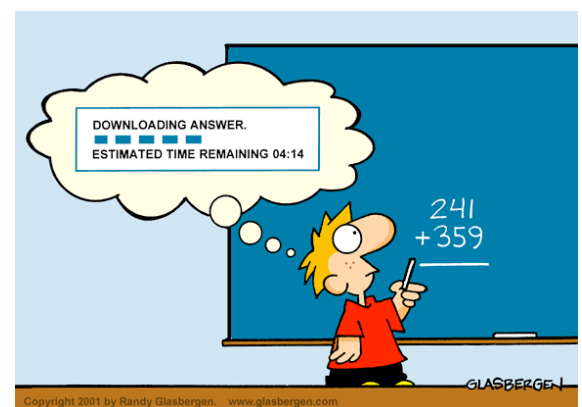
B

$$\begin{array}{r}
 (15x + 5) + (10x + 25) = 180 \\
 25x + 30 = 180 \\
 -30 \quad -30 \\
 \hline
 25x = 150 \\
 x = 6 \\
 \\
 m\angle BCD = 10(6) + 25 = 85^\circ
 \end{array}$$

9. In the diagram, $\ell \parallel m$, Explain why $\frac{x}{y} = 1$.

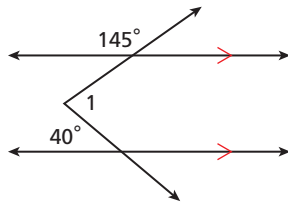


10. Suppose that lines ℓ and m are intersected by transversal p . One of the angles formed by ℓ and p is congruent to every angle formed by m and p . Draw a diagram showing lines ℓ , m , and p , mark any congruent angles that are formed, and explain what you know is true.

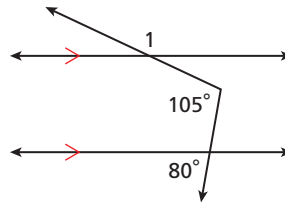


Find $m\angle 1$ in each diagram. (Hint: Draw a line parallel to the given parallel lines.)

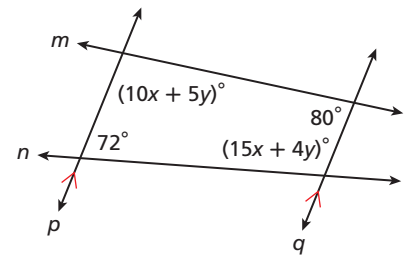
11.



12.



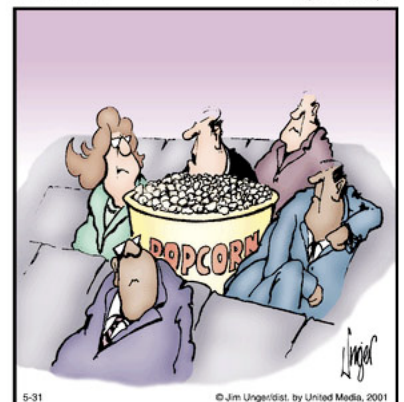
13. Find x and y in the diagram. Justify your answer.



14. Two lines are parallel. The measures of two corresponding angles are a° and $2b^\circ$, and the measures of two same-side interior angles are a° and b° . Find the value of a .

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